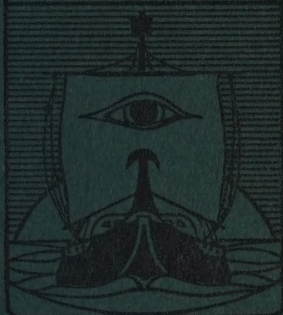


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Edited by
Prof. J. W. W. STEPHENS
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Malaria

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LIEUT.-COL. J. W. W. STEPHENS,
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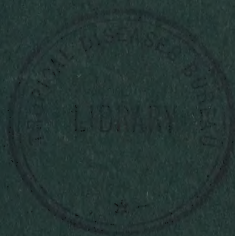
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STUDIES IN THE TREATMENT OF MALARIA

XXVI. THE ACTION OF ARSENIC AND OF QUININE ON QUARTAN MALARIA

BY

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J. W. S. MACFIE

From the Liverpool School of Tropical Medicine

Undertaken at the request of the War Office

(Received for publication 1 May, 1919)

Two intravenous injections of novarsenobillon 0.9 gramme were given at an interval of approximately a week in two cases (Nos. 1524 and 1525). The results, which are given in the temperature charts, show that the treatment had no appreciable effect either on the temperature or on the parasites. After it had been ascertained that novarsenobillon was ineffective, an intramuscular injection of quinine bihydrochloride grains 15 on each of two consecutive days was given in each of the cases. From the charts it will be seen that in neither case did the injections cause the disappearance of the parasites, trophozoites and gametes persisting. In one case (1524) the temperature was controlled, in the other (1525) it was not.

T. = quartan trophozoites or schizonts.

G. = quartan gametes.

Neg. = no parasites found.

N. = intravenous injection of novarsenobillon.

Q.M. = intramuscular injection of quinine bihydrochloride.

Q.O. = oral administration of quinine sulphate.

A comparison with the results given in Studies XVI, XXV, and XXVII shows a remarkable difference in the action of novarsenobillon and quinine on the three species of malaria parasites.

[illegible]

February														March														
DATE	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	M.	E.	M.	E.	M.	E.	M.	E.	M.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	
F	97	98	101	98	96	97	96	96	97	104	98	100	98	97	96	96	97	96	97	98	97	98	97	98	97	98	97	98
P	T.	G.	T.	T.	T.	T.	T.	T.	T.	T.	G.	T.	G.	T.	G.	T.	G.	G.	G.	G.	G.	T.	G.	T.	G.	T.	G.	T.
Dose			gm. q									gm. q																

[illegible]

NOVARSENOBILLON

The action of novarsenobillon on *Plasmodium vivax* is marked. In this infection its action is even more rapid and efficient than that of quinine, a single intravenous injection of 0.9 gramme causing the disappearance from the cutaneous blood of all stages of the parasites within twenty-four hours. In the case of *P. falciparum* and *P. malariae* novarsenobillon in the same dosage has no appreciable effect on the temperature or on the parasites.

QUININE

An intramuscular injection of the bihydrochloride of quinine grains 15 on each of two consecutive days only, exerts in the case of *P. vivax* a constant and rapid effect both on the temperature and the parasites; in the case of *P. falciparum* the action on the temperature and trophozoites is also well defined, though relapses occur more quickly than in the case of *P. vivax*, whilst in the two cases of *P. malariae* treated in the same way there is little if any effect on the parasites, but in one of the two cases the temperature was controlled.

REFERENCES

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